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16. (Amended) The dry etching process according to Claim 14, wherein a non-aluminum reactive gas is added when the substrate includes a layer of aluminum.

REMARKS

Claims 1-4, 6-14 and 16-23 are pending in the present application. All of the pending claims are rejected based on art under either 35 U.S.C. §102(b) or 35 U.S.C. §103(a).

Rejections Under 35 U.S.C.102(b) and §103(a)

The Examiner rejects claims 1, 2, 3, 12, 14 and 15 under 35 U.S.C. §102(b) as anticipated by Hori et al., U.S. Patent No. 5,445,710, claims 4-11 and 16-22 under 35 U.S.C. 103(a) as anticipated by Hori et al. in view of Fong et al., U.S. Patent No. 5,939,831, and claims 13 and 23 under 35 U.S.C. §103(a) as obvious over Hori et al. in view of Fong et al. and further in view of Ishigami, U.S. Patent No. 6,097,094.

Applicants respectfully traverse these rejections. Independent claim 1 recites, in part:

> providing a substrate having a plurality of stacked layers including metal layers and a base of glass; . . .
> etching the layers on the substrate with the processing gas until a time point when the surface of a lowermost layer on the substrate is etched; and

adding CHF_3 gas to the processing gas for etching the lowermost layer on the substrate, wherein the processing gas is one of Cl_2 and a gaseous mixture containing Cl_2.

These limitations are not taught by the cited art. More specifically, the Hori et al. reference does not teach a substrate having a glass base. Rather the substrate base, 1 or 41, for examples, in Hori et al. is silicon.

In addition, Hori et al. fails to teach or suggest etching the lowermost layer on the substrate with Cl_2 or a gaseous mixture containing Cl_2. Rather, in Hori et al., Example 2, Figs. 4A-4H, Cl_2 is not used to etch the lowermost layer 42 on the substrate base 41. In fact, the SiO_2 film 42 that is formed on the silicon substrate 41 is not a subject for etching (see Figs 4A-4H). It is further submitted that the Fong et al. reference also fails to teach or suggest adding CHF_3 gas to the processing gas including Cl_2 for etching the lowermost layer on the glass substrate.

It is an advantage of the present invention that an opaque white portion is not generated on the glass substrate in the above claimed process.

Accordingly, it is respectfully requested that all rejections under 35 U.S.C. §102(b) and §103(a) be withdrawn as the cited art fails to teach or suggest the claimed invention.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,
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APPENDIX I

AMENDED CLAIMS WITH AMENDMENTS INDICATED THEREIN
BY BRACKETS AND UNDERLINING

1. (Amended) A dry etching process including:

providing a substrate having a plurality of stacked layers including metal

layers and a base of glass;

introducing a processing gas into a vacuum chamber to achieve a

predetermined controlled pressure level therein;

applying radio frequency power to a substrate placed within the vacuum

chamber for generating plasma in the vacuum chamber, whereby the substrate is

processed[, the substrate having a plurality of stacked layers including metal layers];

etching the layers on the substrate with the processing gas until a time point

when the surface of a lowermost layer on the substrate is etched; and

adding CHF$_3$ gas to the processing gas for etching the lowermost layer on the

substrate, wherein the processing gas is one of Cl$_2$ and a gaseous mixture containing

Cl$_2$.

16. (Amended) The dry etching process according to Claim [15] 14, wherein

a non-aluminum reactive gas is added when the substrate includes a layer of

aluminum.

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